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EXAMINER

NOLAN, DANIEL A

| ART UNIT | PAPER NUMBER |
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| 2654     |              |

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Please find below and/or attached an Office communication concerning this application or proceeding.

|                              |                             |                  |
|------------------------------|-----------------------------|------------------|
| <b>Office Action Summary</b> | Application No.             | Applicant(s)     |
|                              | 09/820,865                  | KORALL ET AL.    |
|                              | Examiner<br>Daniel A. Nolan | Art Unit<br>2654 |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

1) Responsive to communication(s) filed on 30 March 2001.

2a) This action is **FINAL**.      2b) This action is non-final.

3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

4) Claim(s) 1-45 is/are pending in the application.

4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.

5) Claim(s) \_\_\_\_\_ is/are allowed.

6) Claim(s) 1-45 is/are rejected.

7) Claim(s) \_\_\_\_\_ is/are objected to.

8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

9) The specification is objected to by the Examiner.

10) The drawing(s) filed on 30 March 2001 is/are: a) accepted or b) objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11) The proposed drawing correction filed on \_\_\_\_\_ is: a) approved b) disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12) The oath or declaration is objected to by the Examiner.

#### Priority under 35 U.S.C. §§ 119 and 120

13) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) All b) Some \* c) None of:

1. Certified copies of the priority documents have been received.

2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.

3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) The translation of the foreign language provisional application has been received.

15) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

#### Attachment(s)

1) Notice of References Cited (PTO-892)

2) Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_.

4) Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_.

5) Notice of Informal Patent Application (PTO-152)

6) Other: \_\_\_\_\_.

**DETAILED ACTION**

***Drawings***

1. The replacement drawings were received on 18 July 2002. These drawings are accepted.
2. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because reference characters "46" and "40" both appear to designate the *backbone* (last 2 lines page 30, 1<sup>st</sup> 2 page 31).
3. A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

***Information Disclosure Statement***

4. The listing of references in the specification (i.e., pages 2, 17, etc.) is not a proper information disclosure statement. 37 CFR 1.98(b) requires a list of all patents, publications, or other information submitted for consideration by the Office, and MPEP § 609 A (1) states, "the list may not be incorporated into the specification but must be

submitted in a separate paper." Therefore, unless the examiner on form PTO-892 has cited the references, they have not been considered.

***Specification***

5. The summary of the invention is not a summary at all, but amounts to a mere recitation of the claims that is contrary to the spirit and intent of CFR § 1.73 which reads, in part:

*"Summary of the invention: A brief summary of the invention indicating its nature and substance, which may include a statement of the object of the invention, should precede the detailed description. Such summary should, when set forth, be commensurate with the invention as claimed and any object recited should be that of the invention as claimed."*

Apart from the lack of brevity (7½ pages), considering this cosmetic makeover of the claims would amount to having the claims provide the only specification for themselves. Such circular reasoning is not valid and so cannot be recognized by the Examiner.

Appropriate correction is required.

6. The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required:

- No specification is provided for a *data recognition unit for recognizing a remote data input* (claim 1 line 8). The Examiner is proceeding with the understanding that this

describes any of the well-known method of distinguishing the presence/absence of meaningful signals.

- No specification is provided for the features of claim 36, including a *corresponding sequence in a base language by real time automatic translation*. The Examiner is proceeding with the understanding that the translation referred to corresponds to the disclosed prior art of record in the instant application (page 3 lines 10-18).

7. The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification, such as:

- "of" should be one word (2<sup>nd</sup> line from end page 11).
- "*million entries*" should be two words (6<sup>th</sup> line from end page 24)
- "*output in*" should be two words (5<sup>th</sup> line from end page 28)

8. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

The following title is suggested: "*Database access by speech or text, the output mode being determined by the input mode*"

### **Claim Objections**

9. Claims 1 and 41 are objected to because of the following informalities:

- A colon should end the 2<sup>nd</sup> line of claim 1.
- Claim 1 is subject to interpretation, as the limitation would be met by any prior art not specifying either of both inputs of voice and/or text. The Examiner is proceeding with the understanding that the word "between" is intended for "via" (4<sup>th</sup> line).
- The features of claim 41 should be separated by semicolons for consistency.

Appropriate correction is required.

### ***Claim Rejections - 35 USC § 103***

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which that subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

11. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was

not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

**Kupiec & Anderson et al**

12. Claims 1-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kupiec (U.S. Patent 5,500,920) in view of Anderson et al (U.S. Patent 4,579,533 A).

13. Regarding claim 1 as understood by the Examiner, the invention for *semantic co-occurrence filtering for speech recognition and signal transcription applications* by Kupiec reads on the feature of the claim for *an interface for remote user input for reading a database* as follows:

- Kupiec (column 4 lines 36-37) reads on the feature of a *speech recognition unit for recognizing a human speech input*;
- Kupiec (column 4 lines 61-62) reads on the feature of a *data recognition unit for recognizing a remote* (column 6 line 26) *data input*;
- Kupiec (figure 6 – with *reformulation* requiring *formulation*) reads on the feature of a *query formulation unit, coupled to that speech and data units, and operable both for formulating a searchable query from a recognized input by at least one of that speech and data recognition units, and* (column 11 line 6) *for prompting that automatic question unit to elicit further input from the user; and*

- Kupiec (7<sup>th</sup> line from bottom of column 6) reads on the feature of *wherein the interface is associated with a database to search that database using that recognized input.*

Kupiec does not speak to determining whether the mode of output is *speech or text*. Anderson et al, with the *method of teaching a subject including use of a dictionary and translator*, reads on the feature of *an automatic question unit operable to determine whether a user is connected via at least one of a voice-based and a text-based capable communication link* (claim 1 column 9 lines 56-64), *and for eliciting input from a user in accordance with that determination* (as, *providing responsive* in line 56). It would have been obvious to a person of ordinary skill in the art of speech signal processing at the time of the invention to apply the method/teachings of Anderson et al to the device/method of Kupiec so as to keep ROM requirement low by eliminating the need to program alternatives to patently obvious conditions.

14. Regarding claim 2, the claim is set forth with the same limits as claim 1. Kupiec (column 22 line 25) reads on the feature that *speech recognition unit comprises a speech-to-text converter operable to convert a user speech input into query information for that database, and* (column 1 line 45) *that database comprises text entries.*

15. Regarding claim 3, the claim is set forth with the same limits as claim 1. Kupiec reads on the feature of a *speech-to-phoneme converter* (50 in figure 2) *operable*

*to convert a user speech input into query information for that database (column 6 lines 53-55), and wherein that database comprises entries made up of groups (the “phones” of column 9 lines 29-37).*

16. Regarding claim 4, the claim is set forth with the same limits as claim 1. Kupiec reads on the feature of *combined speech-to-text converter* (column 6 line 40) and *speech-to-phoneme converter* (column 6 lines 44-50 & column 9 lines 38-51), *operable to convert a user input into query information* (column 6 lines 53-58) for that *database*.

17. Regarding claim 5, the claim is set forth with the same limits as claim 1. Kupiec reads on the feature *to determine a level of confidence of an output* of that *speech recognition unit* (with the “hypothesis scoring” of column 12 lines 15-22).

18. Regarding claim 6, the claim is set forth with the same limits as claim 1. Kupiec (column 2 line 29) reads on the feature *to provide speech and text outputs*. Kupiec does not speak to determining whether the mode of output is *speech or text*. Anderson et al (211→217/218 figure 7 with column 8 lines 29-31) read on the feature *for selecting one of the speech and text outputs based on a user's data receipt ability* (as provided for before in response to claim 1 with reference to column 9 lines 56-64).

It would have been obvious to a person of ordinary skill in the art of speech signal processing at the time of the invention to apply the method/teachings of

Anderson et al to the device/method of Kupiec so as to keep the ROM requirement low by defaulting to eliminate non-essential programming.

**Kupiec, Anderson et al & Dutton et al**

19. Claims 7-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kupiec in view of Anderson et al and further in view of Dutton et al (U.S. Patent 6,138,100 A).

20. Regarding claim 7, the claim is set forth with the same limits as claim 6. Neither Kupiec nor Anderson et al speak to application in *mobile phones*. The *interface for a voice-activated connection system* of Dutton et al reads on the feature that *the interface is "interface able" to a **mobile** telephone data facility*, which would have made it obvious to a person of ordinary skill in the art of speech signal processing at the time of the invention to apply the method/teachings of Dutton et al to the device/method of Kupiec & Anderson et al so as to connect users over a network.

21. Regarding claim 8, the claim is set forth with the same limits as claim 1. Neither Kupiec nor Anderson et al speak to application in *mobile phones*. Dutton et al reads on the feature of a *WEB, WAP, plain text or SMS* (with the "HTML" of column 7 lines 27-42), which would have made it obvious to a person of ordinary skill in the art of speech signal processing at the time of the invention to apply the method/teachings of

Dutton et al to the device/method of Kupiec & Anderson et al so as to be able to search all available resources.

22. Regarding claim 9, the claim is set forth with the same limits as claim 1. Neither Kupiec nor Anderson et al speak to *messaging*. Dutton et al (column 2 line 37) teaches the feature that *the interface is "interfaceable" to a messaging service*, which would have made it obvious to a person of ordinary skill in the art of speech signal processing at the time of the invention to apply the method/teachings of Dutton et al to the device/method of Kupiec & Anderson et al so as to enable benefits that naturally become manifest as vocabularies increase.

**Kupiec, Anderson et al & Meador III et al**

23. Claims 10-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kupiec in view of Anderson et al and further in view of Meador III et al (U.S. Patent 5,638,425 A).

24. Regarding claim 10, the claim is set forth with the same limits as claim 1. While Kupiec does address *internal phonetic spelling* and of a *query formulation unit to submit a recognized speech input as a query to search that database* (addressed in response to the same feature in claim 1), neither Kupiec nor Anderson et al provide detail on requesting spelling from the user. The *automated directory assistance system using word recognition and phoneme processing* of Meador III et al (124→130 in figure

7) reads on the feature that, *in the event of failure to obtain a match* (76→"B" in figure 3), *to prompt that automatic question unit to ask the user to spell that recognized speech input*. It would have been obvious to a person of ordinary skill in the art of speech signal processing at the time of the invention to apply the method/teachings of Meador III et al to the device/method of Kupiec & Anderson et al so as to overcome unacceptably low recognition probability levels.

25. Regarding claim 11, the claim is set forth with the same limits as claim 10. Kupiec (column 10 lines 39-68) reads on the feature for *associative linkage between associated names for widening searches on the basis of variations of input names*.

26. Regarding claim 12, the claim is set forth with the same limits as claim 10. Kupiec & Anderson et al do not speak to applications so are silent on the issue of *contact points*. Meador III et al (last name, street, number, etc. in column 8 lines 55-57) reads on the feature that the *database is a contact directory having at least one contact point for each of a plurality of searchable database entries*. It would have been obvious to a person of ordinary skill in the art of speech signal processing at the time of the invention to apply the method/teachings of Meador III et al to the device/method of Kupiec & Anderson et al so as to further distinguish between similar items.

**Kupiec, Anderson et al, Meador III et al & Imielinski et al**

27. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kupiec in view of Anderson et al and further in view of Meador III et al and further in view of Imielinski et al (U.S. Patent 6,240,448 B1).

28. Regarding claim 13, the claim is set forth with the same limits as claim 12. Neither Kupiec, Anderson et al nor Meador III et al address *output formats*. With the *audio access to information in a wide area computer network*, Imielinski et al (column 11 lines 33-40) read on the feature of a *hierarchy of contact point types is provided to define which of that contact points to output first*. It would have been obvious to a person of ordinary skill in the art of speech signal processing at the time of the invention to apply the method/teachings of Imielinski et al to the device and/or method of Kupiec, Anderson et al & Meador III et al to make the appearance of the response agree with the query.

**Kupiec, Anderson et al & Meador III et al**

29. Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kupiec in view of Anderson et al and further in view of Meador III et al.

30. Regarding claim 14, the claim is set forth with the same limits as claim 12. Kupiec & Anderson et al do not mention *Boolean searching*. Meador III et al (last name, street, number, etc. in column 8 lines 57-59) reads on the feature that a *contact point is*

*usable as an input to obtain a searchable database entry*, which would have made it obvious to a person of ordinary skill in the art of speech signal processing at the time of the invention to apply the method/teachings of Meador III et al to the device/method of Kupiec & Anderson et al so as to produce a combined probability that will determine the satisfactory candidate.

**Kupiec, Anderson et al & Ziauddin et al**

31. Claims 15 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kupiec in view of Anderson et al and further in view of Ziauddin et al (U.S. Patent 6,581,055).

32. Regarding claim 15, the claim is set forth with the same limits as claim 1.

Kupiec & Anderson et al do not mention *database searches*. Ziauddin et al (column 4 lines 40-45) read on the feature that the *question unit is programmable with a plurality of questions as a function of the size of the database*, which would have made it obvious to a person of ordinary skill in the art of speech signal processing at the time of the invention to apply the method/teachings of Ziauddin et al to the device/method of Kupiec, Anderson et al so as to minimize the user effort.

33. Regarding claim 16, the claim is set forth with the same limits as claim 15.

Kupiec & Anderson et al do not mention *database searches*. Ziauddin et al (column 10 lines 47-51) reads on the feature that *questions are storables in a hierarchy* (the "rank" of

column 51-58) which corresponds to a predetermined search strategy for the database (column 4 lines 1-3), and wherein that automatic voice question unit is operable to stop asking questions (by virtue of those "portions being disabled" in column 4 lines 36-39) as soon as sufficient information has been obtained to terminate a database search. It would have been obvious to a person of ordinary skill in the art of speech signal processing at the time of the invention to apply the method/teachings of Ziauddin et al to the device/method of Kupiec & Anderson et al so as to avoid profitless interrogation.

**Kupiec, Anderson et al, Ziauddin et al & McDonough et al**

34. Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kupiec in view of Anderson et al and further in view of Ziauddin et al and further in view of McDonough et al (U.S. Patent 5,625,748 A).

35. Regarding claim 17, the claim is set forth with the same limits as claim 16. Kupiec, Anderson et al do not mention database searches and Ziauddin et al is silent as to use of human operators. The discriminator using posterior probability or confidence scores of McDonough et al (58→20 in figure 5) reads on the feature that the interface is operable to connect a user to a human operator when that hierarchy of questions has ended (column 12 lines 12-13) and a database search has not been terminated.

It would have been obvious to a person of ordinary skill in the art of speech signal processing at the time of the invention to apply the method/teachings of McDonough et al to the device/method of Kupiec, Anderson et al & Ziauddin et al so as

to extend the search/selection ability beyond the limitations of the computer programming.

**Kupiec, Anderson et al, Ziauddin et al & Meador III et al**

36. Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kupiec in view of Anderson et al and further in view of Ziauddin et al and further in view of Meador III et al.

37. Regarding claim 18, the claim is set forth with the same limits as claim 16. Kupiec & Anderson et al do not mention *database searches* and Ziauddin et al is silent as to use of human operators. Meador III et al (column 5 lines 4-8) reads on the feature that *the interface is operable to connect a user to a human operator when a user input is not translatable into information usable for searching that database*.

It would have been obvious to a person of ordinary skill in the art of speech signal processing at the time of the invention to apply the method/teachings of Meador III et al to the device/method of Kupiec, Anderson et al & Ziauddin et al so as to not have a search/selection process limited by the scope of the original programming.

**Kupiec, Anderson et al & Meador III et al**

38. Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kupiec in view of Anderson et al and further in view of Meador III et al.

39. Regarding claim 19, the claim is set forth with the same limits as claim 1. Neither Kupiec nor Anderson et al invoke human interference. Meador III et al (with the “probability comparator” of column 3 lines 23-27) reads on the feature of a *confidence level determiner, associated with that speech recognition unit, and operable to determine a level of confidence for a recognition instance of that speech recognition unit, that confidence level determiner being further operable to connect a user to a human operator* (column 5 lines 4-8) when a user input is associated with a confidence level lower than a predetermined confidence threshold., It would have been obvious to a person of ordinary skill in the art of speech signal processing at the time of the invention to apply the method/teachings of Meador III et al to the device/method of Kupiec & Anderson et al so as to conform to the operator-assisted information procedures that are familiar to users.

**Kupiec, Anderson et al & Meador III et al**

40. Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kupiec in view of Anderson et al and further in view of Meador III et al.

41. Regarding claim 20, the claim is set forth with the same limits as claim 12. Kupiec & Anderson et al do not mention *call completion*. Meador III et al (column 2 line 25) reads on the feature of a **switch** for connecting a user to a **contact point** retrieved from that database. It would have been obvious to a person of ordinary skill in the art of speech signal processing at the time of the invention to apply the method/teachings of

Meador III et al to the device/method of Kupiec & Anderson et al so that the caller is prompted as few times as possible.

**Kupiec & Anderson et al**

42. Claim 21 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kupiec in view of Anderson et al.

43. Regarding claim 21, the claim is set forth with the same limits as claim 1.

Kupiec (column 6 line 26) reads on the feature of a *data exchange mechanism operable to bring about data interactivity* between that *database and a remotely located user database*.

**Kupiec, Anderson et al, Meador III et al & Emerson et al**

44. Claim 22 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kupiec in view of Anderson et al and further in view of Meador III et al and further in view of Emerson et al (U.S. Patent 4,612,416 A).

45. Regarding claim 22, the claim is set forth with the same limits as claim 14.

Kupiec, Anderson et al & Meador III et al do not involve applications; so do not include the *format of message headers*. With the *integrated message service system*, Emerson et al (column 13 line 62) reads on the feature to *insert an identification of a caller into a header of a message left by that caller*, which would have made it obvious to a person

of ordinary skill in the art of speech signal processing at the time of the invention to apply the method and/or teachings of Emerson et al to the device and/or method of Kupiec, Anderson et al & Meador III et al so as to identify the message for processing before opening, as *skipping or reporting status*.

**Kupiec, Anderson et al, Meador III et al & Dutton et al**

46. Claim 23 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kupiec in view of Anderson et al & further in view of Meador III et al & further in view of Dutton et al.

47. Regarding claim 23, the claim is set forth with the same limits as claim 14. Kupiec, Anderson et al & Meador III et al do not speak to applications so are silent on the issue of *contact points*. Dutton et al (column 2 lines 44-50) reads on the feature that *contact point is a telephone number*. It would have been obvious to a person of ordinary skill in the art of speech signal processing at the time of the invention to apply the method/teachings of Dutton et al to the device/method of Kupiec, Anderson et al & Meador III et al so as to enhance the flexibility of a VAC with automatic dialing, for activity accounting and to provide a discriminator to distinguish between similar selections.

**Kupiec, Anderson et al, Meador III et al & Emerson et al**

48. Claim 24 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kupiec in view of Anderson et al and further in view of Meador III et al and further in view of Emerson et al (U.S. Patent 4,612,416 A).

49. Regarding claim 24, the claim is set forth with the same limits as claim 22. Kupiec, Anderson et al & Meador III et al do not involve applications; so do not include the *format of message headers*. Emerson et al (column 13 lines 31-51) reads on the feature that *identification is one of a text string* (line 51), *a photograph, an audio sequence and a video sequence*, which would have made it obvious to a person of ordinary skill in the art of speech signal processing at the time of the invention to apply the method/teachings of Emerson et al to the device/method of Kupiec, Anderson et al & Meador III et al so as to consolidate all messages by a particular category for ease of delivery and retrieval.

**Kupiec, Anderson et al & Admitted Prior Art**

50. Claims 25-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kupiec in view of Anderson et al and further in view of Admitted Prior Art.

51. Regarding claim 25, the claim is set forth with the same limits as claim 1. Kupiec & Anderson et al do not mention *location*, but the instant application (last paragraph page 27) admits that the feature that *database is searchable to retrieve a*

*location, and wherein that retrieved location is "super-imposable" on one of a map, a video and a photograph.*

It would have been obvious to a person of ordinary skill in the art of speech signal processing at the time of the invention to apply the method/teachings of the Admitted Prior Art to the device/method of Kupiec & Anderson et al so as to avoid the lengthy prose that is required as the alternative to a pictorial description of a location.

52. Regarding claim 26, the claim is set forth with the same limits as claim 25. Kupiec (30 in figure 1) reads on the feature of a *graphical output unit operable to send that map to that user.*

53. Regarding claim 27, the claim is set forth with the same limits as claim 25. Neither Kupiec nor Anderson et al address *mapping a route*. The Admitted Prior Art (4<sup>th</sup> line from end page 27) reads on the feature of a *location system operable to determine a current location of a user, that location system is operable to trace a route from that current location to that retrieved location*, which would have made it obvious to a person of ordinary skill in the art of speech signal processing at the time of the invention to apply the method/teachings of Admitted Prior Art to the device/method of Kupiec & Anderson et al so as to avoid the misdirection possible with complex written instruction.

**Kupiec & Anderson et al**

54. Claims 28 and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kupiec in view of Anderson et al.

55. Regarding claim 28, the claim is set forth with the same limits as claim 1. Kupiec (column 4 lines 28-30) reads on the feature that *database comprises results fields including one of a text string field, a photograph field and a video sequence field.*

56. Regarding claim 29, the claim is set forth with the same limits as claim 1. Kupiec reads on the feature that *question unit comprises a speech output operable to output questions in spoken form* (31 in figure 1) *to users connected via speech-enabled devices and a text output to output questions in text form* (32 in figure 1) *to users connected via text-enabled devices.*

**Meador III et al & Admitted Prior Art**

57. Claims 30-33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Meador III et al in view of the Admitted Prior Art.

58. Regarding claim 30, Meador III et al reads on the feature of *geographic location data* (114 in figure 6) *associated with personal identification data* but does not disclose use *in search queries to obtain an associated location.* The Applicant (page 27 last paragraph) reads on the features of the claim for a "positioner" for determining a current

*position of an enquirer (6<sup>th</sup> line from end page 27) receive that location data from that location database in response to a query involving that personal identification data; and (last line page 27) a route determiner for determining a route from that current position to that desired location using that location data.*

It would have been obvious to a person of ordinary skill in the art of speech signal processing at the time of the invention to apply the method/teachings of the Admitted Prior Art to the device/method of Meador III et al so as to add the ability to plan and personally meet with the conversant/respondent.

59. Regarding claim 31, the claim is set forth with the same limits as claim 30.

Meador III et al (column 3 line 30) reads on the feature that *location database is a directory associating subscriber identification data with subscriber address data.*

60. Regarding claim 32, the claim is set forth with the same limits as claim 30.

Meador III et al does not address *mapping a route*. The Admitted Prior Art (with "map to guide", 7<sup>th</sup> line from end page 27) reads on the feature of *a graphical output operable to output that route as a route on a map*, which would have made it obvious to a person of ordinary skill in the art of speech signal processing at the time of the invention to apply the method/teachings of Admitted Prior Art to the device/method of Meador III et al so as to avoid the misdirection possible with complex written instruction.

61. Regarding claim 33, the claim is set forth with the same limits as claim 32.

Meador III et al discloses *interactive* products but not in conjunction with geographical work. The Admitted Prior Art (by stipulating the "current location" in the 5<sup>th</sup> line from the end of page 27) reads on the feature that *graphical output is operable to output that route in real time*, which would have made it obvious to a person of ordinary skill in the art of speech signal processing at the time of the invention to apply the method and/or teachings of Admitted Prior Art to the device/method of Meador III et al so as to ensure that the directions generated reflect the most current road and building configuration.

**Meador III et al, Admitted Prior Art & Anderson et al**

62. Claim 34 is rejected under 35 U.S.C. 103(a) as being unpatentable over Meador III et al in view of the Admitted Prior Art and further in view of Anderson et al.

63. Regarding claim 34, the claim is set forth with the same limits as claim 30. Neither Meador III et al nor the Admitted Prior Art speak to determining whether the mode of output is *speech or text*. Anderson et al (claim 1 column 9 lines 56-64) reads on the feature of a *combined voice and text output operable to determine whether a user is connected via one of voice capable and text capable communication, and operable to output that route as a sequence of instructions in text and voice format in accordance with that determination*.

It would have been obvious to a person of ordinary skill in the art of speech signal processing at the time of the invention to apply the method/teachings of

Anderson et al to the device/method of Meador III et al & the Admitted Prior Art so as to keep ROM requirement low by eliminating the need to program alternatives to patently obvious conditions.

64. Regarding claim 35, the claim is set forth with the same limits as claim 34. Neither Meador III et al nor the Admitted Prior Art speak to the subject of *defined languages*. Anderson et al (column 21 lines 1-6) reads on the feature that *combined voice and text output is operable to output that sequence of instructions in a pre-selected language* which would have made it obvious to a person of ordinary skill in the art of speech signal processing at the time of the invention to apply the method/teachings of Anderson et al to the device/method of Meador III et al & the Admitted Prior Art so as to permit multi-lingual access.

65. Regarding claim 36 as understood by the Examiner, the claim is set forth with the same limits as claim 35. Meador III et al as presented by the Admitted Prior Art (page 3 lines 10-18) reads on the feature that *sequence in that pre-selected language is obtainable from a corresponding sequence in a base language by real time automatic translation*.

66. Regarding claim 37, the claim is set forth with the same limits as claim 30. Meador III et al does not discuss geographic matter. The Admitted Prior Art (with the disclosure of "GPS" on 6<sup>th</sup> line from end of page 27) reads on the feature that *location*

*data comprises map co-ordinates* which would have made it obvious to a person of ordinary skill in the art of speech signal processing at the time of the invention to apply the method and/or teachings of the Admitted Prior Art to the device/method of Meador III et al so as to eliminate the need for the user to interpret the information provided.

67. Regarding claim 38, the claim is set forth with the same limits as claim 30. Meador III et al does not discuss geographic matter. The Admitted Prior Art (with the association of the "GPS" to the current location - on the 6<sup>th</sup> & 5<sup>th</sup> lines from end of page 27 respectively) reads on the feature that that *positioned is operable to translate street address data into corresponding map co-ordinates* which would have made it obvious to a person of ordinary skill in the art of speech signal processing at the time of the invention to apply the method/teachings of Admitted Prior Art to the device/method of Meador III et al so as to eliminate the need for the user to interpret the information provided.

#### Anderson et al & Kupiec

68. Claim 39 is rejected under 35 U.S.C. 103(a) as being unpatentable over Anderson et al in view of Kupiec.

69. Regarding claim 39, Anderson et al (claim 1 column 9 lines 56-64) reads on the feature of *determining, as a connection type, whether a user is connected via one of a voice-based, a text-based and a combined voice-text capable communication link*,

*eliciting input from a user via either one of voice-and text based communication according to that connection type (as, providing responsive in line 56) and (with the keyboard 5 in figure 1) reads on the feature of recognizing one of human speech and data input to that interface;*

Anderson et al does not speak to *database queries*. Kupiec (figure 6 – with *reformulation requiring formulation*) reads on the feature of *a formulating a searchable query from that recognized input, and eliciting further input from a user unless a query sufficient for searching that database has been formulated* (column 11 line 6) and *searching a database using the sufficient searchable query* (7<sup>th</sup> line from bottom of column 6). It would have been obvious to a person of ordinary skill in the art of speech signal processing at the time of the invention to apply the method/teachings of Kupiec to the device/method of Anderson et al so as to apply voice recognition to the existing DBMS application product.

**Anderson et al, Kupiec & Haddock et al**

70. Claim 40 is rejected under 35 U.S.C. 103(a) as being unpatentable over Anderson et al in view of Kupiec and further in view of Haddock et al (U.S. Patent 5,265,014 A).

71. Regarding claim 40, the claim is set forth with the same limits as claim 39. While Kupiec (column 2 line 4) addresses *ambiguities*, neither that nor Anderson et al do so by interacting with the database. Haddock et al (column 8 lines 2-14) read on the

features of determining whether an ambiguous answer is received from that database, and if an ambiguous answer is received, then eliciting a further input from a user (column 2 lines 10-11) so as to obtain an unambiguous answer from that database. It would have been obvious to a person of ordinary skill in the art of speech signal processing at the time of the invention to apply the method/teachings of Haddock et al to the device/method of Anderson et al and Kupiec so as to allow a knowledgeable user to provide the wherewithal to approach irresolvable programmed query problems.

***Claim Rejections - 35 USC § 102***

72. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

**Kupiec**

73. Claims 41-45 are rejected under 35 U.S.C. 102(b) as being anticipated by Kupiec.

74. Regarding claim 41 as understood by the Examiner, Kupiec (column 26 lines 36-51) reads on the feature of *remotely reading a database via a remote communication device having a communication mode*, prepared as follows:

- Kupiec (column 24 lines 22-26) reads on the feature of *entering a query request via that remote communication device in that communication mode*,
- Kupiec (column 24 lines 66-67) reads on the feature of *sending that query request to a communication interface in that communication mode*,
- Kupiec (column 25 lines 30-33) reads on the feature of *receiving instructions in that communication mode for entering query items to form a database search query*,

75. Regarding claim 42, the claim is set forth with the same limits as claim 41. Kupiec (column 1 line 43) reads on the feature that *the communication mode is a mode of voice communication*.

76. Regarding claim 43, the claim is set forth with the same limits as claim 41. By disclosing their invention with text-input applications (column 22 line 26), Kupiec (column 22 lines 30-31) teaches the feature that *communication mode is of text communication mode*.

77. Regarding claim 44, the claim is set forth with the same limits as claim 41. With the depiction of the *transcriber* converting speech to text in preparing queries (250 in figure 11), Kupiec teaches the feature that *database interrogation mode is a text communication mode*.

78. Regarding claim 45, the claim is set forth with the same limits as claim 42. With the disclosure of a *speech-to-phoneme converter* (50 in figure 2) *operable to convert a user speech input into query information for that database* (column 6 lines 53-55), Kupiec reads on the feature that database interrogation mode is phonemes communication mode.

### ***Conclusion***

79. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- Anderson<sup>423</sup> et al (U.S. Patent 5,878,423 A) dynamically processing an index to create an ordered set of questions.
- Carey et al (U.S. Patent 5,956,706 A) limiting the cardinality of an SQL query result.
- Hutson (U.S. Patent 5,559,940 A) real-time information analysis of textual material.
- Casey et al (DERWENT 1997-319358) automated subscriber telephone number providing - prompting to speak name/location & digitizing responses before feeding them to speech recognition devices, whose outputs are used to search database.
- Shaffer et al (U.S. Patent 5,999,595 A) location-specific processing messaging.
- Beyda et al (DERWENT 1999-083967) user-level messages processing in which each box is uniquely associated with user and with physical location.

80. Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Daniel A. Nolan at telephone (703) 305-1368 whose normal business hours are Mon, Tue, Thu & Fri, from 7 AM to 5 PM.

If attempts to contact the examiner by telephone are unsuccessful, supervisor Richemond Dorvil can be reached at (703)305-9645.

The fax phone number for Technology Center 2600 is (703)872-9314. Label informal and draft communications as "DRAFT" or "PROPOSED", & designate formal communications as "EXPEDITED PROCEDURE". Formal response to this action may be faxed according to the above instructions,

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Washington, D.C. 20231

or hand-delivered to: Crystal Park 2,  
2121 Crystal Drive, Arlington, VA,  
Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to Technology Center 2600 Customer Service Office at telephone number (703) 306-0377.

Daniel A. Nolan  
Examiner  
Art Unit 2654

DAN/d  
October 20, 2003

  
RICHEMOND DORVIL  
SUPERVISORY PATENT EXAMINER